## Abstract of the Disclosure

When a solenoid drive current I is controlled toward a certain target current value $I_T$, overshoot and undershoot relative to the target current value are repeated such that the current settles down to the target current value. The solenoid drive current is so controlled as to settle down to the target current value after the current is swung up and down. As a result, the attracting force settles down to the midway point of the variation between the attracting force characteristics in the current-increasing direction and the current-reducing direction, respectively, of the solenoid actuator. The hysteresis characteristics can be canceled out.